

## ENTOMOLOGICAL SOCIETY.

October 7th, 1844.—G. Newport, Esq., President, in the Chair.

Mr. Bedell exhibited specimens of *Tortrix rutilana*, Hb. (a species new to Britain), taken at Sanstead Down near Croydon, on juniper bushes.

Mr. Wollaston exhibited numerous specimens of the rare *Cossonus Tardii*, taken in decayed beach and sycamore trees in Lord Mount-Edgcombe's park, Cornwall.

Mr. Raddon exhibited a number of caterpillars of a species of *Agrotis*, which had proved very destructive to the potatoe crop in Devonshire, eating through the young shoots just beneath the surface.

Mr. Edward Doubleday exhibited a box of Chilian *Coleoptera*, some of which were new, and of interesting forms.

The President exhibited a number of specimens of *Vanessa Io*, which he had subjected in the larva state to a series of experiments, with the view of determining the question as to the power of reproduction of the limbs in those orders of insects which undergo a complete metamorphosis, and which had fully determined the existence of such a power, the entire legs, including the whole of the coxa and the different parts of the legs, being reproduced: in some cases the limb reproduced was small and comparatively imperfect; but in all the unguis were reproduced, although the tibial spines were generally absent, as he had also observed to be the case in the *Lithobiidæ*. He had also determined that the reproductive process took place in the antennæ of the *Iulidæ* when cut off in the middle. Many of the caterpillars had however died from excessive hæmorrhage, and he had found that the best period for prosecuting the experiment was, preceding the last stage of the insect's existence as a caterpillar, two or three days before or after the moulting takes place: in moist weather the number of caterpillars which died was far greater than in fine weather, the blood coagulating slowly. [See the details of these experiments published by Mr. G. Newport, in a subsequent part of the Philosophical Transactions of the Royal Society of London.]

Mr. H. Goodsir gave an account of his experiments and observations on the reproductive powers of the Crustacea (which he had communicated to the preceding meeting of the British Association). He had found the reproductive power greater in this class than in Insects; but he had observed that the antennæ in the Crustacea are not capable of reproduction. He exhibited an extensive series of drawings illustrating the process of reproduction. He had observed, that when the leg is injured in any part, the Crab throws it off at a spot in the coxa distinguished by a slender annulus, the extreme base of the coxa not being capable of reproduction. In the lower Crustacea, however, he had observed that reproduction takes place from any part of the legs, and not merely at the middle of the coxa, as in the *Brachyura*. He had detected a system of oil-vessels within the

shell circulating over the surface of the limb, perfectly analogous to the system of vessels in the ova for the supply of nourishment to the young; and he had no doubt that this system in the limbs had for its object the reproductive process. In *Cancer Pagurus* the embryo claw was found coiled upon itself within its sac during the process of reproduction, but in the Lobster it was not thus coiled up.

Extracts from letters were read from Colonel Hearsey and Capt. Boys, addressed to Mr. Westwood, containing various observations on the habits of Indian insects.

In the former communication Colonel Hearsey mentions the capture of specimens of different species of *Paussidæ* by Mr. Benson and Dr. Bacon, also a pair of a new species of *Æstrus* in copulâ, and a new *Hister* with white spots on the elytra, and other *Necrophaga*, taken out of the dead body of a Cobra de Capella which had destroyed a quantity of Mrs. Hearsey's poultry.

In the other communication Captain Boys describes the habits of a species of *Orthoptera* belonging to Latreille's genus *Tetrix*, about an inch long, which readily takes to the water and dives under it, remaining at the bottom attached to a stone for many minutes together, the dilated foliaceous appendages of the hind legs being well-adapted for swimming,—being the first instance recorded of a natorial Orthopterous insect. He also mentions as remarkable, that he had never taken a *Lucanus* either in the plains of India or in the Vindyah range of hills, although they are not uncommon in the Himalayan range, where he always found them feeding on the fungi of various trees, and he had been informed that a friend had even noticed them feeding upon excrementitious matter. He had never taken *Meloë* except at an elevation of 11,000 feet above the level of the sea in the Himalayahs. At an elevation of 14,000 feet he took a *Tenthredo*; they were common at 10,000 feet, where the diurnal *Lepidoptera* were scarce, and he had not there met with a single true *Papilio*: several species of *Vanessa* were more common, and at 13,600 feet he took two specimens of a species allied to *Doritis Apollo*. He had also taken two or three very fine *Bolboceri*, and a *Megacephala* nearly allied to, if not identical with, *M. Euphratica*.

Extracts were also read from a letter addressed by Dr. Cantor to the Rev. F. W. Hope, on the insects of Prince of Wales Island; in which the writer gives the following extract from his note-book respecting a species of the singular genus *Trochoides* (of which he also inclosed a highly magnified figure):—

“Nov. 7, 1842. *Trochoideus Amphora*\*, mihi. The night was very dark, and numerous minute insects were attracted by the flame of the lamp, this among the rest. It is the first and the only one of the *Paussidæ* I ever observed here. Those few which I have seen up in Bengal were captured precisely under similar circumstances.

\* *T. Amphora. Piceus nitidus, punctatissimus, punctis minutis, tenue setosus, prothorace lateribus marginatis et in medio angulatis, antennis, clypeo, oris partibus et pedibus piceo-testaceis. Long. corp. lin. 1½.*

*T. Amphora* appears to be closely allied to *T. Desjardinsii*, Guérin (Trans. Ent. Soc. ii. 97), inhabiting Mauritius."

The Rhinoceros-beetles (*Oryctes*) are very destructive to cocoa-nut plantations, as they devour the flowers and leaves; and coolies are regularly employed to clear the trees thus infested: yet he never saw more than twenty-five to thirty at the time destroyed in a single tree. The presence of the beetle is indicated by the appearance of the gigantic leaves, which have the edges regularly indented. Koombang is the Malayan name for a beetle, but the Malays denominate this species Koombang κατ' ἐξοχήν. He had particularly attended to the araneideous genus *Attus*, several of the species of which are of the most exquisite colours, and had drawn them from the life, the metallic colours generally fading, after the insect is plunged into spirits, into a dull black. He had also made some notes on their habits which he proposed to publish. Of the genus *Myrmarachne* he had observed four or five species. He also inquires, "Is it known that many of the *Arachnida* are covered with scales similar to those of the *Lepidoptera*? I can find it nowhere recorded, and I never knew so till I examined mine under the microscope, since which discovery I have always added a magnified *scale* to my sketches."

November 4th.—G. Newport, Esq., President, in the Chair.

Mr. Weaver exhibited an extensive collection of *Lepidoptera* captured during a recent visit to Scotland, including various new species of *Tortricidæ*, *Tineidæ*, &c., and also a fine series of specimens of *Hipparchia Melampus* of Fuesslin (a species new to this country), taken in July on marshy ground amongst the mountains near Kinloch Rannock in Perthshire, and which he stated are only to be found on the wing during the sunshine, dropping into the grass on the sun being obscured.

Mr. Evans exhibited various insects from New Holland and North America.

Mr. E. Doubleday exhibited specimens of a new American species of *Saturnia* allied to *S. Promethea*, having the sexes alike. Also a beautiful moth belonging to the genus *Lophocampa*, several specimens of which had been captured alive in the London Docks, supposed to have been imported in cargoes of mahogany from Honduras.

Mr. F. Bond presented some oak-leaves, each covered with two distinct species of oak-spangles, or minute galls.

Mr. Westwood exhibited various Indian insects from Captain Hutton, including his *Plectropteron Dianæ*, which proved to be *Saturnia Selene*, and the instruments described by that gentleman as the means by which the insect cuts its way out of its cocoon, were thereby ascertained to be the patagia or tippets. Also a new species of moth closely allied to the *Bombyx Mori*, which Captain Hutton had discovered on mulberries in India, and of the transformations of which an account was read from a letter addressed by him to Mr. Westwood, in which he also mentioned having discovered another Indian silk-moth closely allied to the Tusseh silk-moth.

Drawings of two Indian species of Locusts, made in that country by Lieut. Edwards, M.E.S., were exhibited, and a memoir read by the Rev. F. W. Hope on the Asiatic species of that family, and by whom a large collection of nearly allied species from various localities was exhibited.

The species which for two successive years had ravaged India from one end to the other is regarded by Mr. Hope as undescribed, and of which he gives the following character:—

*Œdipoda Edwardsii*, Hope. *Fusca, capite thorace pectore pedibusque rubescentibus, elytris dilutè fuscis, brunneo-maculatis, dentibus rubris.*—Long. corp. unc. 2, lin. 4. Long. tegm. singuli, unc. 2, lin. 6.

A paper by Mr. Westwood, containing the description of a new genus of exotic *Cimicidæ*, was read.

*STENOTOMA*, Westw. Genus novum inter *Coreidas* locand um. *Caput lobo antico porrecto bispinoso; lateribus ante oculos bispinosis. Ocelli 2. Antennæ articulo 2do clavato, 3tio ovali lato, 4to ovali oblongo, præcedenti minori. Prothorax lateribus acutè spinosis.*

*Stenotoma Desjardinsii*, W. *Lutea, fulvo parum variegata undique fusco punctata; antennis fuscis, abdominis lateribus fusco et albido alternatim maculatis.* Long. corp. lin. 3.—Hab. in Insulâ Mauritii. D. Desjardins. Mus. nostr.

December 2.—G. Newport, Esq., President, in the Chair.

Mr. Desvignes exhibited a specimen of *Coccinella lineata*, Fab., now ascertained to be an extremely rare variety of *C. ocellata*.

Mr. Pelerin exhibited specimens of the New Zealand caterpillar and its parasitic *Clavaria*, already figured and described in the Transactions of the Society.

Mr. Milton exhibited numerous specimens of Dipterous larvæ, evidently those of a moderate-sized *Tipula*, 852 individuals of which he had extracted, mostly alive, from the crop of a pheasant recently killed.

Mr. Evans exhibited a numerous collection of New Holland insects, several being of new and interesting species.

Mr. Westwood exhibited the case formed by the larva of *Porrectaria vibicipenella* (a species new to this country, discovered by Mr. Weaver in Worcestershire during the past season), and which he had received from the senator Van Heyden of Frankfort. Mr. Marshall stated that he had also obtained the cases of this species from Mr. Weaver, by whom the insect had been reared from the caterpillar state.

Mr. Westwood also exhibited a new genus of *Carabidæ* from Guinea, allied to the genus *Morio*, received from M. Westermann: also drawings of an allied new genus from Ceylon, in the collection of Mr. Melly, and of various other new genera of Coleoptera.

Mr. F. Bond exhibited a specimen of the caterpillar of *Bombyx potatoria*, entirely covered with a white fungus very similar to muscardine.

Mr. W. W. Saunders exhibited a dragon-fly which had been captured flying over the Atlantic 600 miles from land, by Mr. Stephenson.

A memoir by Mr. Stevenson on the Entomological peculiarities of New Zealand was read. After commenting upon the peculiarities of the climate and the vegetation of New Zealand, the author remarks, that the opinion that there are but few insects in New Zealand is erroneous; the great masses of vegetation requiring vast numbers of insects to keep them in check, and hasten their decay when dead by boring into the timber more or less superficially; the *Tetramera* in fact form three-fourths of the *Coleoptera*. Only two *Cicindela* were observed, and but few *Carabida* and *Brachelytra*. The *Elaterida* were more numerous, but no *Buprestida* were met with. The *Clavicornia* also are not numerous, and but very few *Lucanida*\* and *Cetonia*, no traces of *Geotrupida*, and only two or three *Heteromera*. Some of the *Curculionida* are of singular forms; some species allied to *Brentus* burrow in the larva state into the hard wood of trees, and the *Longicornes* are very abundant; the larvæ of some of the larger species being eaten by the natives either in a raw or half-roasted state. Two *Coccinella* and two *Forficula* only were captured, and only seven or eight species of *Hymenoptera*, including a species of Bee, with large burthens of farina on its hind legs. Five or six species of *Libellula* and three of *Cicada* were observed, and a large formidable-looking apterous *Gryllus* (*Deinacrida*, White), which is very abundant in old trees, secreting itself in crevices of the bark. The small grasshoppers are numerous. In *Diptera*, the carrion flies perform a more important part in nature, as scavengers, than elsewhere. *Tipulida* and mosquitoes abound, but there are decidedly but few *Lepidoptera*, some of which are very analogous to the English species, such as the Painted Lady and Red Admiral Butterflies.

#### ZOOLOGICAL SOCIETY.

Oct. 14, 1845.—William Yarrell, Esq., Vice-President, in the Chair.

The following extract was read from a letter, dated Madeira August 18, 1845, received from the Society's Corresponding Member, the Rev. R. T. Lowe:—

“The Rev. R. T. Lowe has the pleasure of adding to the Society's collection a fine specimen of a new *Zeus* (*Zeus conchifer*, Lowe) of the greatest rarity; the present being the second example only which has hitherto occurred.”

The specimen was exhibited to the Meeting.

“On the genus *Anous*, Leach (*Megalopterus*, Boie).” By John Gould, Esq., F.R.S. &c.

There is no family of birds more generally diffused over the globe than the Terns, and certainly no group of the Natatorial Order less understood, or which would more amply reward the studious investi-

\* *Mitophyllus irroratus*, Parry, was found under bark.